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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,883	07/26/2001	Michael R. Bruce	AMDA.508PA	7504

7590  
Crawford PLLC  
Suite 390  
1270 Northland Drive  
St. Paul, MN 55120

04/16/2003

EXAMINER
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CHAN, EMILY Y

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/915,883

Applicant(s)

BRUCE ET AL.

Examiner

emily y chan

Art Unit

2829

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to Amendment communication(s) filed on 11 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 2-4, 9, 15, 16 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### Claims 1-24 are presented for examination

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,5-6,10-13, 17-19 and 20-22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3,10 21-22 and 25-26 of U.S. Patent No. 6,488,405.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences between the claimed application recited in claims 1, 5-6, 10-11, 17 and 20-22 and the claims 1-3,10 21-22 and 25-26 of U.S. Patent No. 6,488,405 are that: (1) the claimed application uses a near infrared (nIR) laser light at circuitry in the die and the U.S. Patent No. 6,488,405 uses a polarized laser source; and (2) the U.S. Patent No. 6,488,405 does not specifically recites the circuitry in the die to absorb laser radiation including to absorb at least one of free carriers and phonons. However, as for (1) above, a near infrared (nIR) laser is a polarized laser beam is as evidenced by

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US patent 5,398,681 (see claim 14). As for (2) above, it would have been obvious to one of ordinary skill in the art that the circuitry in the die would inherently absorb laser radiation including to absorb at least one of free carriers and phonons when a laser light is directed to the circuitry in the die.

With respect to claims 12-13 and 18-19, the laser scanning microscope recited in claim 10 of U.S. Patent No. 6,488,405 inherently includes having a wavelength of about 1.3 microns, raster scanning the laser light across the die and varying the operation of laser which includes pulsing the laser.

Claims 7-8, 14, 17 and 23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,488,405 in view of Channin ('199).

With respect to claims 7-8, 14 and 23, U.S. Patent No. 6,488,405 does not teach the step of using the image to identify the portion of circuitry that cause the liquid crystal to change phase.

With respect to claim 17, U.S. Patent No. 6,488,405 does not teach the step of causing portion of the liquid crystal to reach a temperature near its threshold temperature for changing phase.

Channin ('199) discloses to coat a liquid crystal layer over an IC circuit for detecting the defect of the circuit due to the optical phase changes in the layer of liquid crystal and expressly teaches using the image to identify the portion of circuitry that cause the liquid crystal to change phase (see Col. 4, lines 23-26).

Channin ('199) also expressly teaches that liquid crystal approaches threshold temperature liquid crystal changed phase (see Col. 5, lines 30-39).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of using the image to identify the portion of circuitry that cause the liquid crystal to change phase and causing portion of the liquid crystal to reach a temperature near its threshold temperature for changing phase into the U.S. Patent No. 6,488,405 's method and system because defect circuitry or unscribed wafers coated with a liquid crystal layer can be easily observed in numerous locations as disclosed by Channin ('199) (see Col. 6, lines 18-20). This is a provisional obviousness-type double patenting rejection.

#### ***Allowable Subject Matter***

Claims 2-4, 9, 15-16 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: claims 2-4, 9, 15-16 and 24 are indicated allowable because the claimed features that operating a circuit in the die near a failure condition in claims 2-4, using silicon in the die to convert light energy from the laser into heat energy in claim 9, taking a plurality of images of the liquid crystal and averaging the image in claims 15 and 24, overlaying the image of the liquid crystal on an image of the die circuitry and matching the portion of the liquid crystal changing phase to a defective circuit portion in the die in claim 16 are not taught or suggested by the prior art.

**ARGUMENTS ARE MOOT BECAUSE OF NEW GROUND OF  
REJECTION**

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Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Y Chan whose telephone number is 7033056123. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cuneo Kammie can be reached on 7033081233. The fax phone numbers for the organization where this application or proceeding is assigned are 7033085841 for regular communications and 7033085841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 7022056123.

EC  
April 8, 2003

  
KAMAND CUNEO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800